

W5YI

Nation's Oldest Ham Radio Newsletter

REPORT

Up to the minute news from the world of amateur radio, personal computing and emerging electronics. While no guarantee is made, information is from sources we believe to be reliable. May be reproduced providing credit is given to The W5YI Report.

Fred Maia, W5YI, Editor, P.O. Box 565101, Dallas, TX 75356-5101

★ In This Issue ★

Amateur Radio Rulemaking Status:

- Permissible Communications
- Folding Novice into VEC System
- VHF/UHF Rules to Affect Novices
- New Novice/Tech Question Pools
- Licensing of Visiting Foreign Hams
- Privatizing Commercial Exams
- Wind Profilers, AVM & Such
- Packet at 219-220 MHz.

Amateur Call Signs Issued to April 1st
FCC to Select New Chairwoman

Cable Re-regulated by FCC

Regulation of "900" Phone Industry
STS-56 SAREX Mission, Big Success

...and much, much more!

Vol. 15, Issue #9

\$1.50

PUBLISHED TWICE A MONTH

May 1, 1993

WHERE THINGS STAND! HAM RADIO RULE MAKING

We routinely track all FCC rulemaking that impacts the ham radio. Right now, we seem to be following far more Amateur Radio proceedings than is usually the case. Last week we telephoned the FCC staff in Washington, D.C. and Gettysburg, PA, to get an update on the status of ham radio rulemaking.

PERMISSIBLE AND PROHIBITED AMATEUR COMMUNICATIONS - PR Docket 92-136

This rulemaking got its start nearly two years ago when the FCC suggested permitting "other than regular" amateur communications on the ham bands to "provide greater flexibility to transmit communications for public service projects and personal matters."

Historically, amateurs have been restricted to emergency, technical and non-business communications. But the Commission has been overwhelmed in recent years with many requests from the amateur community to deviate from communications permitted by Part 97.113. Basically that rule bans all commercial communications of any type.

"The restrictions were designed to protect the non-commercial character of the Amateur Service and ensure its basis and purpose, that is, as a reservoir of volunteer communicators, technicians and electronics experts dedicated to advancing the radio art, to provide public service

communications particularly in times of emergencies, and to enhance international goodwill."

Ham radio was never intended to be a communications service to assist public safety and other government agencies ...or for such things as logistical support for parades and other events, classroom instruction, ordering supplies for remotely located organizations, supplying news to the media, selling ham gear, rebroadcasting non-amateur communications ...or for expediting the personal and club business of ham operators. In fact these communications are specifically outlawed from the ham bands. Still, the FCC gets dozens of requests to permit this type information to be handled on amateur frequencies.

In trying to find a way to accommodate the steady stream of these requests, the FCC initially thought that perhaps a system of communications priorities might allow amateurs to more fully participate in non-amateur communications. Initially, three types or levels of amateur communications were suggested; Priority, Primary and Secondary.

Those communications which involve emergencies and disasters where the safety of life and property are at stake would be "Priority." Primary communications would be the currently authorized amateur communications. The transporting of all other non-amateur information would be Secondary.

The FCC also remarked that perhaps amateurs might even be permitted to discuss any type

of personal and business communications on the ham bands as long as their communications service was not sold. They listed three possible exceptions: Morse code practice and information bulletins where the operator might be compensated as an employee - and classroom instruction where the teacher was paid.

The challenge is how to write a simple, easy to understand rule that allows an expansion of amateur communications without throwing open ham frequencies to those who would exploit them commercially. The Commission asked for recommendations from the American Radio Relay League.

The ARRL responded in January of last year by agreeing that the FCC should indeed relax the no-business communications rule and legalize more types of communications. They suggested that amateur radio operators should be permitted to conduct communications for themselves or for others that "...could reasonably be furnished alternatively through other radio services" as long as they did not do so "...on a regular basis."

The League also felt that all "...communications for hire or for material compensation direct or indirect, paid or promised" except classroom instruction, telegraphy practice and information bulletins should be outlawed. Surprisingly, the League's proposal did not address the use of ham radio spectrum for personal business use ...a key component of the FCC's proposal. The Commission repeatedly mentioned the possibility of using amateur radio to conduct personal business - such as for ordering a pizza or making a hotel reservation - on the amateur air waves!

Exactly a year ago, the FCC released its long awaited Notice of Proposed Rulemaking (NPRM) to change the "Prohibited Transmissions" rule §97.113 in the Amateur Radio Service. What the Commission did was to basically adopt the ARRL suggested communications guidelines. The public comments had a cutoff date of October 1.

The ARRL did not define what "on a regular basis meant" in their proposal and that drew a big response from the amateur community. Many amateurs did not their ham ticket premised on a term that would be subject to wide interpretation. In their reply comments, the League referred to their "...on a regular basis" term by saying that a "...degree of rigidity ...does not properly belong in the content rules for the Amateur Radio Service."

This entire proceeding has now gone through all of the required *Administrative Procedures Act* steps which defines how our Government must change rules. The FCC told us that all comments and reply comments have been considered on the matter, and that a Report and Order is in the process of being prepared

for forwarding to the Commissioners for action sometime this summer. "The item is in the review cycle and once approved by the Bureau, goes on to the Commission." The results of this proceeding could be very far reaching indeed! Public comments have suggested that the matter is very complicated and many issues were raised.

FOLDING NOVICE INTO THE VEC SYSTEM PR Docket 92-154

The FCC is very pleased with the way that the VEC program has been going. Up until 1984, the FCC spent hundreds of thousands of dollars maintaining and conducting the Amateur Service's license examination program. The government said at the time that it was costing them \$7.26 to administer a ham exam to a person. Using that figure, it would have cost the Government nearly a million dollars to examine applicants for ham tickets last year. Under the VEC system, this cost is shifted away from the taxpayer.

There are actually two examination programs in the Amateur Service. Novices have been tested informally by two volunteer examiners for years. The Technician through Amateur Extra Class are tested under the VEC System which uses teams of three accredited volunteer examiners (VEs) to conduct the examinations. The VEs are managed by a volunteer-examiner coordinator (VEC) who acts as the link between the FCC and the volunteer testing community. They also develop all of the examination questions - including those for the Novice class. Since all VEC System examination teams are known, it is a relatively simple administrative job to keep the VE teams up-to-date.

In February 1992, both the ARRL-VEC and W5YI-VEC which account for 85% of all VEC testing asked the FCC to also include Novice Class testing under the VEC System. For one thing, errors are less frequent in the VEC System while Novice applications have an error rate approaching 10%. Error handling is not only costly to the Government but they slow down license issuance since the applications must be returned for correction.

The data on the Novice system is also incomplete since the FCC has no idea how many people fail the exam, unlike the VEC System where the passing rate is closely monitored as one of its vital signs. Having only one testing system would also simplify the application Form 610 by eliminating the separate certification section and Novice instructions. And the safeguards in the VEC System minimize the potential for fraud.

The single biggest advantage, however, is that

the Novice level volunteer examiner will be kept current on test questions and procedures since their identities will be known. Such is not the case right now.

On July 1, 1992, the FCC adopted a *Notice of Proposed Rulemaking* which looked toward consolidating the two testing programs. "Our experience with the VEC System and with the current Novice examination system indicates that the VEC System is the superior system," the FCC said. "The informal ad hoc Novice system is inefficient and susceptible to various irregularities." The Commission pointed out that all Novice examinations are currently being administered in the VEC System as a part of other classes of operator licenses.

The FCC proposed to include the responsibility for the preparation and administration of Novice Class operator license examinations under the VEC System with the same conditions that apply to the four higher classes of licenses. These conditions include requiring each VE to be accredited by a VEC, three VEs for the administration of an examination, coordination by a VEC of each examination session, issuance of a Certificate of Successful Completion of Examination (CSCE) to every examinee who scores a passing grade on an examination element and expense reimbursement (a test fee) authorized to the testing community.

Some commenters said that bringing the Novice testing program under the VEC System would reduce examination opportunities for newcomers. The League replied that there is no statistical evidence to support that claim. Actually, the Technician Class is now far and away the entry path of choice into ham radio for beginners and their testing at VEC sessions has not adversely impacted their numbers. Quite the contrary. The number of new Technician Class amateurs is skyrocketing!

A few amateurs also believed that Novices might not be able to travel to existing VEC System test sessions. Actually General Class examiners in every community could establish VEC System test sessions of their own. The W5YI-VEC also suggested that General Class VEs be authorized to conduct Technician Class examinations since this examination requires more examiners and would more positively impact the General Class VE - some of whom might feel they are losing testing privileges.

"A Report and Order has been completed by the staff," we were told, "and has gone on to the FCC Commissioners. It is awaiting final action now in some manner. I could be adopted as proposed - or changes could be made." This could happen at any time.

VHF/UHF RULES CHANGES TO AFFECT NOVICES -
PR Docket 92-289

The American Radio Relay League requested in two rulemaking petitions that a new subband be created at 222.0 to 222.15 MHz for weak signal and experimental communications ...and that Novice frequency privileges be extended to the entire 222-225 MHz band. The ARRL believes that the weak signal subband should be decided by regulation rather than local frequency coordinators. Dr. Michael C. Trahos, KB4PGC, also petitioned the FCC to allow Novices to be control operators of repeaters at 222 and 1270 MHz.

The FCC combined these three petitions and said that they believed they all had merit. A *Notice of Proposed Rule Making* was issued last December which looked toward adopting the three proposals. The comment period closed on February 23, reply comments on March 23.

The FCC is now analyzing the input from the public and working on a Report and Order. Repeater users seem to be up in arms over the possibility that repeater spectrum which is used by thousands may be reduced to permit experimental and weak signal work by a relative few. And there is an objection to inexperienced Novices being allowed to install and control repeaters. There seems to be little opposition, however, to allowing Novice operators to have access to the entire 1.25 meter band.

"The staff is working on drafting a proposal, and final action should take place this summer," the FCC said. "We are never really sure whether an item will be taken up at a Commission meeting or whether it will be done on 'circulation.'" The circulation process means that the matter is circulated to each Commissioner's office rather than taken up at a scheduled meeting.

"There is no secret to the fact that the circulation agenda before the Commission is very lengthy ...more than 150 items. Even though the staff has finished their work and the Bureau makes their recommendation, it can take a long time if the Commission chooses to take the matter up by circulation."

NEW NOVICE AND TECHNICIAN QUESTION POOLS **Element 2 and 3(A)**

Section §97.523 of the Amateur Service rules require that "All VECs must cooperate in maintaining one question pool for each written examination element. These question pools must contain at least ten times the number of questions required for a single examination. Each question pool must be published and made available to the public prior to its use for making a question set." That's the law. The VECs Question Pool Committee began reviewing all Element

2 (Novice) and Element 3A (Technician) examination questions last summer.

All examinations questions and multiple choices for all five written Amateur Radio operator license tests are revised on a four year cycle. The amateur community participates in this process by submitting their recommendations for examination topics and questions. Novice and Technician are reviewed together since they are the sole requirement for the new no-code Technician license. Volunteer examiners must begin using the new questions in their examinations every July 1st.

The Question Pool Committee determined and released the new Element 2 and Element 3A question pools into the public domain last December. They contain approximately 10% less questions. There were 695 questions in the previous pools; only 645 in the current set. (A list of all questions in the new Element 2 and 3A pools may be obtained from The W5YI Group, P.O. Box 565101, Dallas, TX 75356 for \$3.50 postpaid. VISA, MasterCard call: 1-800-669-9594 toll free.)

Most license preparation publishers have agreed to have their new Codeless Technician study manuals available in the publishing marketplace during May 1993. The new Gordon West **"No Code Plus"** manual with answer explanations is already available from the W5YI Group for \$9.95 plus \$2.00 at the above toll free number.

The newly revised Element 2 and 3(A) question pools must be used in all Novice and Technician written examinations administered after June 30, 1993. All VECs and VEs will use exactly the same word-for-word questions, multiple choices and answers. The Novice examination has not yet been included under the VEC System, so General Class amateurs and higher who wish to examine the Novice Class should obtain the needed testing materials from any VEC. The next question pool to be revised will be the General Class. The QPC will begin working on these questions shortly and will release a new Element 3B question pool by year end. The new General Class questions must be used effective July 1, 1994. New Advanced Class questions take effect on July 1, 1995; Amateur Extra Class on July 1, 1996.

LICENSING OF VISITING FOREIGN AMATEURS PR Docket 92-167

This rulemaking suggests a novel licensing scheme whereby all foreign licensed amateur radio operators temporarily visiting the United States would be able to operate their amateur radios for up to 60 days. It would more or less replace the current

reciprocal licensing procedure.

The FCC issues about 2100 one-year reciprocal permits annually to amateurs from the country whose governments have signed reciprocal agreements with the United States. The only way a ham from a country that does not have the reciprocal agreement can get on the air in the United States or its possessions is to pass the exams. Both of these procedures are time consuming.

A new rule being considered would complete the whole process during one quick visit to a VEC System exam session. It would work like this: VE teams would determine the extent of a foreign hams operating privileges and determine how this most closely corresponds with U.S. privileges. A 20 question multiple-choice test on FCC rules and regulations (pass rate: 90%) would then be administered to the visiting foreign amateur. A VE team issued CSCE (*Certificate of Successful Completion of Examination*) would validate immediate 60 day operation. The VECs would keep track of these authorizations by maintaining a database of all 60-day temporary operating permits.

Comments closed on this NPRM last October 26th, reply comments on November 30th. Some of the comments indicate that VE teams might have a difficult time deciphering the operating privileges granted by a foreign ham ticket most of which are in an unfamiliar language. On the other hand, hundreds of reciprocal operating permits are currently issued to foreign amateurs annually by the Commission.

The FCC in Gettysburg also has the same problem but manages to issue the permit anyway. Even if a foreign license can not be fully understood, the FCC has a Part 97 regulation that covers the situation. The rules governing the issuance of a reciprocal permit (see §97.107) state that the "...operating terms and conditions [of a reciprocal permit are those] issued by the alien's government ...not to exceed the privileges of an Amateur Extra Class operator license.

"The FCC staff has finished their work on this proceeding and it is in the review cycle now. It may have already gone to the Commissioners for approval." It will probably be a Report and Order adopting the measure in some form even though the ARRL is on record as opposing the procedure. They would rather see the United States work toward a common licensing program of radio amateurs throughout the world.

PRIVATIZING COMMERCIAL RADIO OPERATOR EXAMINATIONS - FO Docket 92-206

(FO stands for Field Operations Bureau, rather than PR; Private Radio.)

Because of budgetary constraints, the FCC asked for and received legislation authorizing it to delegate the examination of commercial radio operators to non-government organizations. Currently, there are currently six types of commercial radio licenses and two types of endorsements. In addition, there are two new commercial licenses; the *Global Maritime Distress and Safety System* Radio Operator's and Maintainer's license.

Actually this proceeding started in the Field Operations Bureau (FOB) since it was they who administered the examinations. Last fall, the responsibility for Commercial Radio Operator examinations was transferred to the Private Radio Bureau and PRB has now assumed control of the rulemaking. The *Notice of Proposed Rulemaking* asked the public for their views on how such a private sector program should be structured.

The comments and reply comments have now been analyzed by the PRB. On January 14th, the FCC issued a *Report and Order* transferring the handling of all future Commercial Radio Operator license examinations to the private sector. Basically, the FCC's Commercial Radio Operator license testing program will be handled in much the same fashion as the VEC System. That is, examinations will be constructed by selecting questions from a large bank of publicly known questions.

On February 17th, the FCC solicited potential test questions from interested parties and received over 2,200 potential question pool candidates from many different groups. Eventually there are to be seven different question sets. Both the questions and multiple choices are to be released to the public.

The first two pools to be made available will be the Element 1 (Basic radio law and radiotelephone operating practices which every maritime operator should be familiar with) and Element 3 (Electronic fundamentals and techniques.) These two pools should contain about 500 questions using the FCC's published guideline of at least five times as many questions as will be asked in any one examination. The questions, multiple choices and answers should be available to the public by July - with the other question pools following shortly thereafter.

Passing Elements 1 and 3 (the pass mark is 75% answered correct) will yield a General Radiotelephone (GRT) operator license to the applicant. The GRT, (which was previously known as the First Class Radiotelephone) is the most popular of all commercial radio operator licenses. The Element 1 examination contains 24 questions, Element 3: 76, for a total of 100 questions. The applicant must answer 18 Element 1 and 57 Element 3 correctly.

The FCC's new Commercial Radio Operator testing program is to be directed by private groups known as Commercial Operator Licensing Examination Managers (COLEM.) A COLEM, the commercial equivalent of the Amateur Service's VEC, will be certified by the FCC once they enter into a *Memorandum of Understanding* with the Government in much the same manner as VECs.

On April 7th, the FCC announced a filing window for accepting requests from those organizations wishing to be a Commercial Operator License Examination Manager (COLEM.) The application window extends from April 12 through May 7, 1993. "Requests received before or after those dates will not be considered."

Meanwhile, the FCC has discontinued their semi-annual testing of Commercial Radio Operators and has established an interim testing plan for individuals who, by Commission Rule, must have a Commercial Radio Operator license for employment.

These individuals may apply for a special examination at one of the FCC's field offices by presenting a letter from an employer stating that he or she is to be employed in a position that requires a Commercial Radio Operator license.

The FCC had received approximately 1800 applications for the February 1993 Commercial Radio Operator examinations which were canceled. The FCC has now adopted a one-time interim examination procedure for these applicants which permits applicants for Commercial Radiotelephone licenses to be examined by other Commercial Operator licensees holding an equal or higher class license.

A sealed envelope containing the examination will be forwarded to the applicants for this purpose. The examiner must sign and return a certification sheet, answer sheet and examination back to the FCC within 60 days. Special Commercial Radiotelegraph examinations will be administered at FCC Field Offices if requested by applicants who filed an application prior to March 19th.

The FCC said they will be quickly reviewing the COLEM applicants and will make a decision on who should be appointed based on those who will offer the best service in terms of the greatest number of examination opportunities and geographical availability.

"Once the Memorandums of Understanding are executed, we will put out a Public Notice announcing the commercial radio operator license examination managers and we will ask that applicants contact the COLEMs." The FCC said it "...expected to have private Commercial Radio Operator license examinations available to the public on a regular basis by the end of

the summer. That is what we are shooting for."

SPECIAL CALL SIGN SYSTEM

According to the FCC, the most asked question is "How can I get a specific call sign?" As it is now, you can change your call sign but you can not get a specific combination. A ham's license information is kept for two years beyond expiration in the FCC's database. This is to provide a grace period for those who forget to renew their expired licenses. The two year grace period was added when the FCC started issuing licenses for ten-year terms. Previously, the operator portion of the license had a five year grace period.

In 1989, the FCC terminated in a proceeding that looked into whether a custom-assigned callsign system could be established using private sector support. The FCC concluded that such a system would be too costly. Some hams offered to pay for callsigns, but the FCC does not have authority to charge a fee for the amateur service license.

In the Telecommunications Act of 1992, Congress authorized the FCC to use the uncompensated and unreimbursed services of amateur radio organizations who have tax exempt status under 501c3 of the Internal Revenue Service code to provide club and military recreation call signs.

On October 23rd, the American Radio Relay League sent a hand-delivered letter to the FCC seeking to implement this new legislation. ARRL wants to issue radio club call signs from a dedicated call sign block such as from WC#BAA through WC#ZZZ. The League asked that they be designated as the exclusive club and military recreational station call sign administrator.

"Unfortunately, Congress did not include in that legislation, authority to establish a general special call sign system. The authority is limited to club and military rec amateur stations only," FCC said. "We are working on getting that authority implemented as quickly as possible."

But there may be hope that someday the general amateur population may be able to request a ham call sign of their choice. Eyebrows were raised a year ago when the Voice of America Amateur Radio Club was issued the special call sign K3VOA in commemoration of VOA's 50th anniversary. Their previous call was K3EKA. The special call sign assignment was ordered by FCC Chairman Alfred Sikes who probably was not aware of the furor it would cause.

At the Annual VEC Conference held in Gettysburg, Pennsylvania, last year, Ralph Haller, Private Radio Bureau Chief, told the assembled VECs that "Software is being written as I speak that will permit the

FCC to accommodate requests for special amateur call signs within the next three years although the target date is less." There will be a fee attached to the special call sign which Haller hopes "...can go to Gettysburg to finance the service."

We asked the FCC in Washington for an update on the status of distinctive call signs for the general amateur population last week. "It is true that our data processing people are working on a system that will enable us in the future to issue special call signs to amateurs. Before we can do this, however, we will have to go through rulemaking since present rules (§97.17) prohibit us from granting requests for specific call signs. Besides, anything we would do is certain to make someone mad."

We also checked with a Gettysburg official about the status of their new computer system that is in the process of being implemented. We were told that it is due to come on line within six months. The FCC's Gettysburg licensing facility will be changing from a mainframe to a PC-based system. So we will might be hearing more about special call signs shortly! Stay tuned.

The FCC also has received legislation from Congress and authority from the FCC Commissioners to begin electronic license application filing. The plans are, we are told, for the VECs to eventually input Form 610 application data directly into the FCC's computers using a bulletin board system. Gettysburg envisions that the VEC's will simply call up a PC located in Gettysburg and upload the application data which could be as simple as a file containing comma delimited records. The intention is for testing of electronic filing to begin shortly with full implementation scheduled "...sometime next year."

AUTOMATIC CONTROL OF HF PACKET

Several amateur stations have been operating high frequency digital communications under a Special Temporary Operating Authority (STA) for more than five years! The one year authority has been extended five times. On February 1st, the American Radio Relay League has now proposed permanent rules governing HF data operation under automatic control. A rule making number is in the process of being assigned.

The current rules do not permit automatic net-working below 50 MHz and third party traffic must use the AX.25 packet protocol. The big concern about HF packet is the potential for "robot" stations to interfere with HF ham band operation. HF packet appears to work well and "tons" of messages moves along the network.

It is generally agreed that any HF packet

operation should be conducted on specific subbands rather than being allowed on entire bands. A compromise plan to permit semi-automatic control was criticized as unworkable and unacceptable by HF packeteers.

An IARU (International Amateur Radio Union) Region 2 General Assembly meeting produced an HF band plan which provided for automatically controlled data communications. These segments include all bands between 80 and 10 meters and provide for all digital modes including new Clover and Pactor systems. Any HF data operation outside these segments must be under local control.

The "RM" number will trigger a 30 day comment period. Then the FCC will be able to go forth with a Notice of Proposed Rulemaking. "It is no secret that this is a very contentious issue and the passions are running strong both ways."

PACKET MESSAGE FORWARDING PR Docket 93-85

Early in 1991, several hams were cited for unknowingly and automatically retransmitting an anti-war packet message supposedly originated by another politically active ham. The message urged amateurs to vote against the Persian Gulf war by telephoning "900-44-NO WAR" to tell President Bush "NO WAR." It wound its way through several packet stations before being killed.

The Commission believed that the message was a prohibited communication in that it advanced the business interests of "The Coalition to Stop U.S. Intervention in the Middle East." Furthermore, "900" phone calls almost always generate revenue which presented the likelihood that this also might be a fund raising scheme being promoted on the ham bands.

The FCC action faulting amateurs for automatically retransmitting questionable messages they did not originate caused immediate havoc in the ham community. Under the current rules each amateur licensee is fully responsible for assuring that the contents of every transmission from his or her station complies with the rules. Many said the amateur high-speed packet network would have to shut down since there was no way thousands of messages passing through a mail switch could be reviewed by a human control operator one by one.

The Commission now agrees that message screening of automatic data systems is difficult and diminishes the advantage of high speed. It has now issued a Notice of Proposed Rulemaking that would establish a compliance policy of holding the licensee of the station originating a message and the licensee of

the first forwarding station accountable for the transmission of prohibitive communications.

Under this approach, amateurs that only retransmit messages within a high speed message forwarding system would not be responsible for the messages they forward or their stations retransmit unwittingly.

Comments are due July 1st, replies August 1st. "We have done our part of it," FCC said. "We have come forward with a proposal. It is up to people now to tell us what they think of the proposal. Our general rule of thumb for these things is it that from the time of notice of rule making until we get a Report and Order out generally runs about a year." That means final action won't take place until mid-1994.

SPECTRUM SHARING - WIND PROFILERS & AVM ET Docket 93-59, PR Docket 93-61

The electromagnetic radio spectrum is a precious natural resource ...and one that is limited. There is just so much to go around. Today, we live in an age of exploding wireless technology and the need for radio frequencies far outstrips the supply. Wireline and fiber-optics can effectively carry just about unlimited point-to-point communications. Delivery by radio waves is necessary when hard line tethering is impractical.

Since just about all of the usable radio spectrum has been assigned to different uses, the only way new emerging technology and uses for radio can unfold is to share common radio wavelengths. All ham bands at the UHF and higher frequency range are shared with other services. In all cases, Amateur Radio being the secondary user. We must get used to the idea that we are simply tenants in an apartment house we don't own and get along with one another. And if we don't, eviction is not only a distinct possibility but a probability. The FCC has proposed new sharing partners for ham radio in the 70-cm and 33-cm ham bands.

Wind profilers are ground-based radars which measure wind speed and direction in real time. Currently this is accomplished by airborne balloons called radiosondes which must be released manually. Wind profilers gather weather information faster, cheaper and automatically ...including data on severe storms that threaten life and property that is not obtainable in any other manner.

Amateur radio shares the 420-450 MHz ham band with Government Radiolocation and the NTIA wants wind profilers at 449 MHz. The National Telecommunications and Information Administration is the telecommunications advisor to the White House. A

September 1991 NTIA study entitled "Assessment of Bands for Wind Profiler Accommodation" concluded that 449 MHz was the best spot in the radio spectrum for wind profilers. That report also pretty clearly tells who the NTIA is and what they do....

"NTIA is responsible for managing the Federal Government's use of the radio spectrum ...including establishing policies concerning spectrum assignment, allocation and use, and providing the various departments and agencies with guidance. NTIA assesses spectrum utilization, identifies existing and/or potential compatibility problems, ...provides recommendations for resolving any compatibility conflicts, ...and recommends changes to promote spectrum efficiency and improve spectrum management procedures."

The FCC which manages private sector frequencies has no choice but to go along with the NTIA proposal since Government Radiolocation is the primary user.

The 33-cm ham band at 902-928 MHz is used very little by amateurs. The FCC has suggested that a new Land Mobile (Part 90) Location and Monitoring Service (LMS) be located in that band. One of the uses of LMS is for automobile vehicle monitoring (AVM) - the electronic counting of vehicles. Ham radio is secondary to AVM use at 33-cm and that means we can't interfere with the service. The LMS is to be very important to the planned Intelligent Vehicle Highway System. The objective of IVHS is to increase highway capacity, enhance safety and reduce congestion.

Both matters are at the *Notice of Proposed Rulemaking* stage. The NPRM's were adopted almost simultaneously during mid-March. Wind Profiler comments close on June 15th; AVM on June 29th. It will be some time before the comments are analyzed and the path of action determined.

It appears almost a virtual certainty that these proposals will be adopted. The spectrum needs of both of these new services have been under study for many years.

PACKET AT 219-220 MHz - ET Docket 93-40

Since narrow-band business channels and amateur communications are not compatible, the FCC divided the 1.25 meter ham band in 1990 into two exclusive segments. Narrow band business radio got 220-222 MHz, hams 222-225 MHz. The loss of the shared access to 220-222 MHz was a hard blow to the amateur community since they were in the process of establishing a high-speed inter-city packet network in the spectrum.

The FCC said they would entertain a proposal for replacement spectrum to relocate these networks if

a way could be found to coexist with current users.

After extensive testing, the American Radio Relay League filed a petition with the FCC seeking shared access to the 216-220 MHz band which is used by a variety of radio services. Primary users are an inland waterway service known as AMTS (Automated Maritime Telecommunications System) and the new IVDS (Interactive Video and Data Service) which will link viewers with TV stations. The FCC agrees, however, that additional frequencies are needed for amateur wideband packet networks.

The FCC has now released a NPRM proposing to allow amateurs to construct and operate their point-to-point backbone packet network in the 219-220 MHz band on a secondary, non-interference basis. A backbone network connects local packet hubs into regional and nationwide service. They chose not to permit shared access between 216 and 219 MHz due to possible interference to adjacent TV channel 13 and the new IVDS.

The Commission believes that amateurs possess the necessary expertise to design their network so as to avoid interference to other services and to resolve any interference that may inadvertently occur.

Amateur stations operating between 219 and 220 MHz within 50 miles of a maritime coast station must, however, obtain written approval from the AMTS station. And ham packet stations between 50 and 150 miles of a maritime station will be required to notify that station in writing of their planned operation at least 14 days in advance. Amateur transmitter power will be limited to 50 W PEP.

The new rules (§97.303R) are proposed to read: "(1) No amateur station transmitting in the 219-220 MHz segment shall cause harmful interference to, nor is protected from interference due to operation of: (1) Automated Maritime Communications Systems, (2) broadcast television channels 11 and 13, (3) Interactive Video Distribution Service, (4) Land Mobile Services, or (5) any other service with a primary allocation in or adjacent to the band." Only "Data" digital coded communications transmitted at 56 kilobauds or less with a maximum bandwidth of 100 kHz is to be authorized.

This Notice of Proposed Rulemaking, like Wind Profilers, came out of the FCC's Engineering and Technology Bureau and has exactly the same public comment date: June 15th, replies by July 15. This proposal has a very good chance of becoming law since it has been thoroughly coordinated with the present users of the 219-220 MHz band. It will be at least a year, however, before the FCC will be able to take final action since the matter must go through the required public comment process.

W5YI REPORT

Nation's Oldest Ham Radio Newsletter

Page #9

May 1, 1993

AMATEUR RADIO CALL SIGNS

...issued as of the first of April 1993:

Radio District	Gp. "A" Extra	Gp. "B" Advan.	Gp. "C" Tech/Gen	Gp. "D" Novice
0 (*)	AA0MJ	KG0ES	N0WFK	KB0LCI
1 (*)	AA1FY	KD1NZ	N1OUI	KB1ATW
2 (*)	AA2NG	KF2NZ	N2UKS	KB2QBQ
3 (*)	AA3DX	KE3HQ	N3OSA	KB3AQQ
4 (*)	AD4CK	KQ4RI	(***)	KD4ZSA
5 (*)	AB5MC	KJ5KE	(***)	KB5ZOQ
6 (*)	AB6SI	KN6JQ	(***)	KD6TZG
7 (*)	AA7VC	KI7LZ	(***)	KB7TOM
8 (*)	AA8KP	KG8AA	N8XWJ	KB8OTL
9 (*)	AA9GM	KF9OM	N9SZR	KB9IML
N. Mariana Is.	AH0Q	AH0AM	KH0BG	WH0AAV
Guam	NH2P	AH2CS	KH2GP	WH2ANF
Johnston Is.	AH3D	AH3AD	KH3AG	WH3AAG
Midway Is.		AH4AA	KH4AG	WH4AAH
Hawaii	(**)	AH6MK	WH6LT	WH6CQI
Kure Is.			KH7AA	
Amer. Samoa	AH8G	AH8AF	KH8AJ	WH8ABB
Wake W. Peale	AH9C	AH9AD	KH9AE	WH9AAI
Alaska	(**)	AL7OV	WL7JV	WL7CGT
Virgin Is.	NP2W	KP2CB	NP2GK	WP2AHU
Puerto Rico	(**)	KP4UZ	(***)	WP4LWH

CALL SIGN WATCH: *=All 2-by-1 "W" prefixed call signs have been assigned in all continental U.S. radio districts. Group "A" 2-by-2 format call signs from the AA-AK block now being assigned to Extra Class.

**=All Group A (2-by-1) format call signs have been assigned in Hawaii, Alaska and Puerto Rico. Group "B" (2-by-2) call signs now being assigned.

***=Group "C" (1-by-3) call signs have now run out in the 4th, 5th, 6th, 7th and Puerto Rico call districts and Technician/General class amateurs are now being assigned Group "D" (2-by-3 format) call signs.

[Source: FCC, Gettysburg, Pennsylvania]

• The FCC still does not have a permanent Chairman, but it looks "virtually certain" that it will be a minority Chairwoman when one is finally selected. But thirty-five year old **Senate Communications Subcommittee counsel Toni Cook** maintains she has not been contacted about the position.

Meanwhile outgoing FCC Chairman, Al Sikes has accepted a position with the Hearst New Media and Technology Group. He will be very deeply involved in computer technology, fiber-optic information superhighways and new over-the-air electronic media opportunities. Hearst owns six television stations and distributes TV and cable programming. Sikes is known to be a champion of such innovative communications as video dial tone, high-definition television, interactive video data services (IVDS) and personal communications services (PCS).

• As Senate senior counsel, Toni Cook played an important role in drafting the new Cable Act. Cook, who holds a law degree from Northwestern University, was an attorney for the law firm of Wiley, Rein & Felding before she joined the subcommittee. Speculation is that Pres. Clinton is waiting for her to have her baby (next month) before appointing her to head the FCC.

• The FCC has asked for another \$12 million for 1993 to help support regulation under the newly approved Cable Act of 1992. **The FCC has been ordered by Congress to re-regulate the cable industry.** And they are doing it in spades! Cable systems are being ordered to carry local broadcast TV channels including low-power TV stations on up to one-third of their channels. There is also a provision requiring cable companies to position local broadcast TV stations on the same cable channel number or at least the cable channel on which the station was carried in 1985. Monopoly cable rates have been frozen for 6 months and any future allowable increase will be limited by inflation. Present cable rates are to be rolled back 10% under the levels of last fall. The FCC also has been ordered by Congress to determine and publish average cable rates where there is ..and is not effective competition. And program access rules will force the cable industry to make its programming available to its principal competitors ...including DBS (direct broadcast satellite), wireless cable and telephone companies. Insiders say the public and the telcos are the big winners! Cable operators lost big.

• **Look for the Government to adopt new rules regulating "900" telephone service.** Acting on Congressional legislation, the Federal Trade Commission is in the process of mandating required preamble messages, advertising disclosures and new billing and collection procedures. New proposed regulations will require that callers be told the cost per minute and the total cost of the call before they hang up. And the cost of the "900" call must appear right next to the phone number in all print advertising in large 12-point type. If a sweepstakes contest is involved, all promotional advertising must disclose the odds of winning. The Federal "900" Number Bill will also contain a ban on "900" programs directed to children. Consumers will be given a 60 day period from time of billing to dispute phone charges and the "900" service has 90 days to investigate the complaint. A provision in the rules will allow the provider to charge a service fee for the investigation if it is determined the charges were indeed justified. Comments on the FTC proposed rules closed April 9th and final rules are expected in July. As one might expect, the "900" number industry is opposed to the new regulations. They say they are too restrictive and will put them out of business.

SUCCESSFUL COMPLETION OF STS-56 THE LATEST MISSION OF SAREX

STS-56 and SAREX - the *Shuttle Amateur Radio Experiment* - has written itself into history as a record breaking success. But the mission did not start out as well as it ended! At T-11 seconds, the launch of STS-56/ATLAS-2 was scrubbed when a liquid hydrogen high pressure bleed valve failed to indicate closed, causing an automatic shutdown prior to main engine ignition and initiating safing of the vehicle.

While reminiscent of the recent problems with STS-55, this actually was a different problem - an instrumentation error rather than a hardware failure. It was quickly solved and the launch turned around within 48 hours.

The space shuttle Discovery lifted off at 1:29 a.m. EDT (05:29 UTC) Thursday morning, April 8 into clear Florida skies and lit up a significant portion of the Eastern seaboard of the U.S. as it lofted the STS-56 crew into a highly inclined orbit trajectory.

Individuals as far north as New York saw the Space Shuttle roar up the East Coast. In the Washington D.C. area, several people saw the Shuttle for approximately 1 minute as it raced from Southeast to almost due East. Even the crew at WA3NAN, the Goddard Space Center Amateur Radio Club in Greenbelt, Maryland reported visual sightings of the launch. They said it looked to us like a small rapidly moving comet, or perhaps a fourth of July sparkler.

The primary purpose of STS-56 ATLAS-2 (NASA's Atmospheric Laboratory for Applications and Science) mission was to investigate the Earth's Ozone layer during its 9-day flight. SAREX, as usual, was the secondary payload. SAREX allows school groups and amateur radio operators to talk to the Shuttle crew while they are on orbit.

The all ham crew, headed by their commander, KB5AWP Ken Cameron, racked up a number of firsts during the mission. Also aboard Discovery was Steve Oswald KB5YSR, Mike Foale KB5UAC, Ken Cockrell KB5UAH and Ellen Ochoa KB5TZZ.

They talked to students at 18 schools worldwide. Good, clear contacts were reported as young students asked questions about life in orbit. Thirteen of those schools were in the United States, two in Great Britain, one Australia, one in Portugal and one was in South Africa ...eighteen schools in all. That's one more than the previous record set on STS-45!

Several members of the Clear Lake Amateur Radio Club (CLARC) gave up their Easter holiday weekend to assist in conducting two SAREX school contacts in the Houston area. On Saturday, April 10th at 10:14 a.m., students at McWhirter Elementary in

Webster, TX spoke with astronaut Steve Oswald, KB5YSR, during a shuttle pass almost over the Houston area. Steve's daughter, Jana, was on hand to say hello to her dad since they had missed an earlier contact via amateur radio on a link through Australia. Once Jana had said hello, the microphone was passed to the first of eight students to start asking their questions. Fifteen questions and answers were fielded during the seven minute fifty second contact.

On Easter morning, April 11th at 8:48 AM, students at Armand Bayou Elementary in Houston, TX spoke with shuttle commander Ken Cameron, KB5AWP, during a shuttle pass over the United States. Ken's son, Robert, was also on hand to wish his dad Happy Easter and told him to have a good time. The microphone was then passed to another eight students to start asking their questions. In all, twelve questions and answers were handled.

The STS-56 crew also accomplished a historic first two way Amateur Radio contact between two orbiting manned spacecraft. At about 6:35 pm CDT, Saturday, April 10th Mike Foale, KB5UAC, QSO'ed with Aleksandr Polischuk, R2MIR, aboard the Russian MIR space station as the two spacecraft passed within 135 kilometers on their respective orbital paths.

Another historic first was accomplished when experimental fast scan ATV went very well climaxed when W5RRR, the Amateur club station at the Johnson Space Center station, sent live video images from the mission control room at JSC to the Shuttle STS-56 crew as they passed over Houston. The Capsule Communicator was surprised when Commander Ken Cameron asked him to wave at him. Capcom commented that the crew was going to have to ask for permission to come aboard next time (referring to standard practice before enabling live T.V. down link from the shuttle).

Slow scan television, packet and a few general contacts rounded out the schedule. This STS 56 mission also records another first for SAREX as now being the only payload which has flown on all Shuttle Spacecrafts.

Those who copied SAREX transmissions from STS-56, or who were lucky enough to establish two-way radio contact with the Space Shuttle, should direct their QSL requests to: STS-56 QSL, c/o Vienna Wireless Society, P.O. Box 418, Vienna, VA 22183. Include a self addressed stamped envelope. Non-US stations should include the appropriate number of IRCs with your QSL or a \$0.50 U.S. stamp on the envelope for air mail delivery. Report should include callsign, whether worked/heard, date, UTC time, mode, frequency, and QSO number for packet connects. And be patient! It will take some time to get the QSLs out.